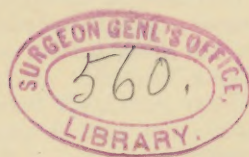


DAVIS (N.S.) Jr. *dup*

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How to Teach Medicine



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IT should be the aim of a course in medicine to teach what diseases exist ; what is their nature ; what are their mutual relationships, and what is their treatment. This information is best obtained by studying a text-book (that is by a recitation course), and by listening to lectures. It is not, however, sufficient that a student know, that a disease, with certain features or characteristics exists, but he must acquire the art which will enable him to recognize it when he meets it. This art must be taught, first by the instructor in physical and clinical diagnosis, and later by clinical teachers. It can only be secured by coming directly into contact with patients, and by examining them repeatedly. It is not enough that an instructor say to his class, he sees, feels or hears certain things, each student must for himself see, feel and hear often enough to train his senses to recognize the phenomena of disease. Such instruction in the art of diagnosis, can only be given to small groups of students, and it must be long continued.

Physical and clinical diagnosis should be taught early in a medical course, certainly as soon as the student begins to attend clinics. It should be taught practically and theoretically as early as the second year in a four-year course. A student cannot at this time attend advantageously other clinics than those especially planned to give him individual training in *methods* of examining the sick. A large out-patient clinic affords the best facilities for such instruction, as the classes can be made small and the clinics numerous. Each student should, if possible, be brought directly in contact with a patient at least every second day during this year. Instruction in the theory of physical diagnosis may simultaneously be given by lectures or recitations.

If the curriculum of our colleges in the second year was not so full of laboratory work and instruction in the more purely scientific branches, a recitation course covering the whole field of medicine should be given then.

But under the conditions existing in most schools, such a course must be postponed to the third year. The function of the course is to acquaint the students with the scope of the field of medicine and with the relationships of diseases, as well as to give them in outline their symptomatology and treatment. Such knowledge is not only necessary in itself, but is essential, that they may comprehend the miscellaneous clinics which they will attend during this and the following year, and it is impossible for a lecturer on medicine, or for clinical instructors, to cover the whole field of medicine in their courses.

In the fourth year the head of the department of medicine should give his lectures. By having a recitation course precede the final lecture course several advantages accrue: A lecturer can devote his time to describing those subjects in regard to which there is the newest information, or in regard to which he has had most personal experience. He may discuss one group of diseases from the standpoint of differential diagnosis; another mainly from the standpoint of etiology and prophylaxis; and a third, perhaps, from the standpoint of treatment; for in this way he will be able to present to his class the most interesting generalizations, or most practical or newest information. Or he may prefer to discuss elaborately and in detail certain groups of diseases only. He can do this without feeling that his class will graduate without having a just idea of the scope of practical medicine, for the earlier recitation course will fill the gaps in his own course. He has a freedom in treating his subject which he would not have if he felt that he must endeavor to describe the major part of medicine in what might be called a systematic manner.

A lecture course and a recitation course each have their place. If a student acquires all his knowledge of medicine from a text-book, the importance of the latter will surely be unduly magnified in his mind. Instead of regarding it as a brief review of the subject, he will be apt to regard it as the whole of medical science. A well executed lecture course, supplementing recitations from a text-book, can not fail to demonstrate that the field of medical literature is only summarized in the latter, and that there is a large amount of detailed knowledge which must be obtained elsewhere. An important attribute of a properly conducted lecture course is also inspiring in student's enthusiasm for observation and study. A lecture course should bear much the same relation to a recitation course that a monograph upon pneumonia or typhoid fever would to the few pages which summarize these subjects in text books upon medicine.

Clinical instruction should be started in the second year of a college course by the physical diagnosis clinics already alluded to. These can be followed in the two subsequent years by miscellaneous medical clinics which will illustrate as a large number of diseases as possible, and the numerous phases of individual diseases. In clinics a student should be taught to recognize by his senses the symptoms and signs of disease, to reason from them to its nature, to the physiological state of the various organs and tissues; moreover the causation of disease, and the application of drugs and remedial procedures to its cure, as well as their mode of action should be illustrated. If clinics are numerous attended it is impossible to exhibit to

all the students many of the most important physical signs. The lecturer may make such a demonstration to a few students, and, contenting himself with this, proceed to lecture upon the nature and treatment of the malady which he shows. A clinic conducted upon this plan is to the majority of students a very imperfect demonstration. It is little better than a didactic lecture illustrated by sketches and diagrams. It is, however, the method most frequently adopted. Rarely it is supplemented by an assistant's demonstration of the most important clinical signs to successive groups of students, while the lecturer proceeds with his discourse. This method is also not wholly satisfactory, for confusion is sure to occur, which will both disturb the lecturer and prevent close attention on the part of the class to what is being said. The main aim in general or numerous attended clinics should be to illustrate the grosser phenomena of disease, its causation and treatment; especially to discuss differential diagnosis, and to emphasize the connection and relationship of physiological disturbances that exist in many organs; in a word, chiefly to convey information and to emphasize the methods of scientific reasoning as applied to the study of medicine. The majority of clinicians when, for example, they show a case of pneumonia, concentrate the attention of the class upon the physical and anatomical condition of the lungs, only briefly expose its differential diagnosis, and still more briefly its treatment. The physiological and anatomical condition of other organs and tissues and the mutual relationship of their disturbances are scarcely mentioned, although they should form the main topics of discourse before a large class. A perfectly reported autopsy will describe the state of every organ and the relationship of each as cause or effect of the state of the other, or their relationship to a common cause. So in the general clinic a broad exposition of the case in hand should be attempted.

In order that students may not lose the advantage to be derived from examining, in detail and individually, the same patients that are thus lectured upon, and have well illustrated to them the obscurer points in their symptomatology, greater use than has generally been made, should be of daily visits to the wards of the hospital under the guidance of either the chief of clinic or his assistant. Only to small groups of students so conducted through a hospital can physical signs and the minutiae of clinical diagnosis be best taught. Moreover, if they walk the ward, at least every second day, they can watch for themselves the progress of diseases, and learn by personal observation their course. It is only to such groups of students that the therapeutic action of drugs can be demonstrated. Most clinical instructors describe in their lecture what the treatment of a given case should be, but the student does not learn by repeated observation of the same patient to note the effects of treatment, and to learn from his teacher how to nicely adapt doses of medicines to individuals, or the exact indications for changes in treatment as they may arise. This knowledge can only be acquired by the frequent observation of the same patient. It is a most important mode of medical study, and one often completely neglected.

Students should be required to write full histories and descriptions of cases based upon their own examination of them. This will teach them to make orderly examinations, and lead to accuracy of observation. Practice

in case recording should be insisted upon in each year in which students receive clinical instruction. Those who teach small groups should require of their students a verbal description of the symptoms they have discovered. It is not so difficult to see, feel or comprehend what is pointed out by an instructor, but to discover symptoms or physical signs and to name them, requires an accuracy and breadth of knowledge which is necessary, although difficult to acquire.

Clinical conferences are assemblies of students under the presidency of a teacher, in which, in turn, they read descriptions of cases that they have been able to examine, making them a text for an exposition of the diseases which they illustrate. The students, after criticism and discussion of the subject by their fellows, must maintain the accuracy and completeness of their exposition. This is a useful mode of instruction, for it is an incentive to thoroughness of preparation of such clinical studies, and the discussions inspire enthusiasm.

If a school is blessed with small classes, a seminar is better still. The literature and all accessible clinical material pertinent to a given subject can there be studied, discussed fully in an informal way by the class, under the guidance of an instructor. A moderate amount of such work is extremely important. It, however, necessitates the possession by a school of a good library upon the subjects to be studied. In this way a pupil can be taught methods of literary research and the value of works of historical interest. The amount of incidental knowledge which he will acquire by such research is always great.

Although to accomplish all that ought to be in the instruction of students in medicine, various methods of teaching must be resorted to, each teacher must be allowed to show his own individuality, or the teaching will become too methodical and lack inspiration. Instructors must be chosen, because they are peculiarly well adapted to give instruction by the method which they are to employ. Certain teachers make excellent demonstrators of symptoms and signs of diagnostic importance; others, excellent clinical lecturers before large classes. While not always so showy, instruction given to small groups of students is often of greater importance than that given to many, therefore, neither the teacher nor the student should estimate the importance of instruction by the number of students who may receive it at one time. To further the interest of schools and students teachers should exhibit less greed for titles and more enthusiasm for teaching.

